

# Welcome

Office for State, Tribal, Local and Territorial Support  
*presents . . .*

***CDC Vital Signs***

**Hepatitis C: Testing Baby Boomers Saves Lives**

May 14, 2013

2:00–3:00 pm (EDT)



Centers for Disease Control and Prevention  
Office for State, Tribal, Local and Territorial Support

# Agenda

<b>2:00 pm</b>	<b>Welcome &amp; Introductions</b>	<b>Dan Baden, MD</b> Associate Director for Field Services Outreach and Engagement, Office for State, Tribal, Local and Territorial Support, CDC
<b>2:04 pm</b>	<b>Presentations</b>	<b>John W. Ward, MD</b> Director, Division of Viral Hepatitis, National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention, CDC  <b>Katherine Bornschlegel, MPH</b> Hepatitis Surveillance Coordinator, New York City Department of Health and Mental Hygiene  <b>Shauna Onofrey, MPH</b> Senior Epidemiologist, Division of Epidemiology and Immunizations, Massachusetts Department of Public Health
<b>2:30 pm</b>	<b>Q&amp;A and Discussion</b>	<b>Dan Baden, MD</b>
<b>2:55 pm</b>	<b>Wrap-up</b>	<b>Dan Baden, MD</b>
<b>3:00 pm</b>	<b>End of Call</b>	



**CDC**  
**Vital**signs™ Teleconference  
to support STLT efforts and build  
momentum around the monthly  
release of **CDC Vital Signs**



# Hepatitis C: Testing Baby Boomers Saves Lives

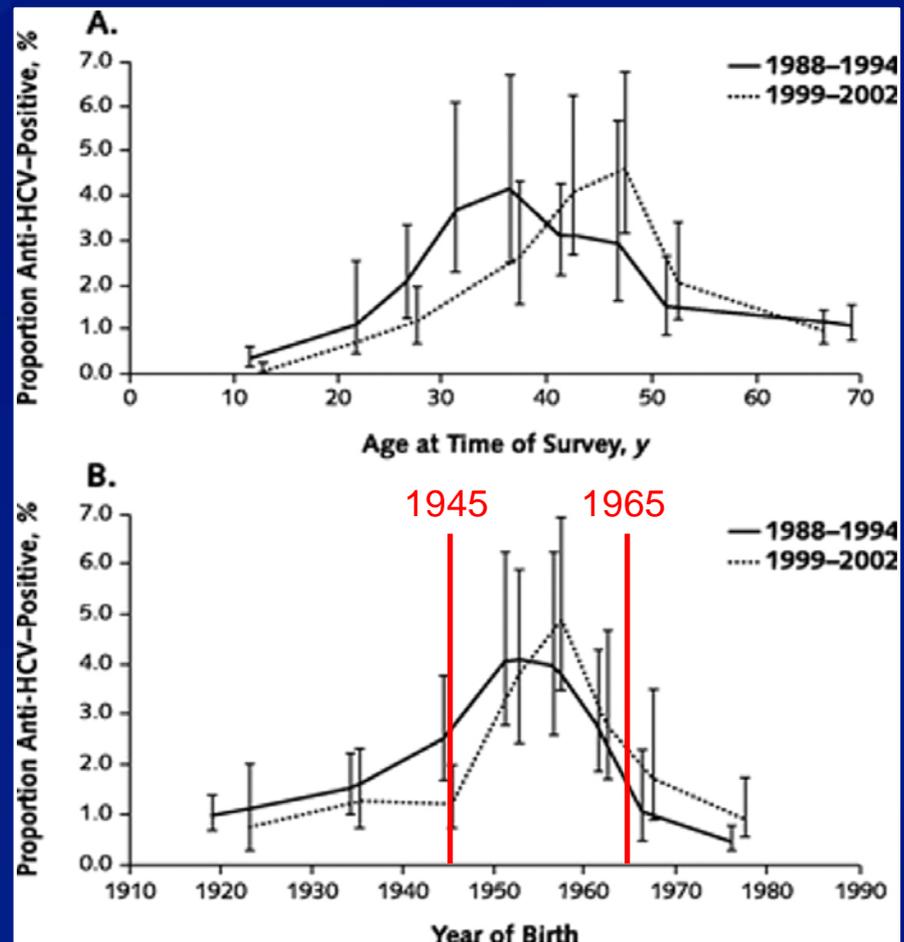
**John W. Ward**

Director, Division of Viral Hepatitis  
National Center for HIV/AIDS, Viral Hepatitis, STD & TB Prevention  
Centers for Disease Control and Prevention

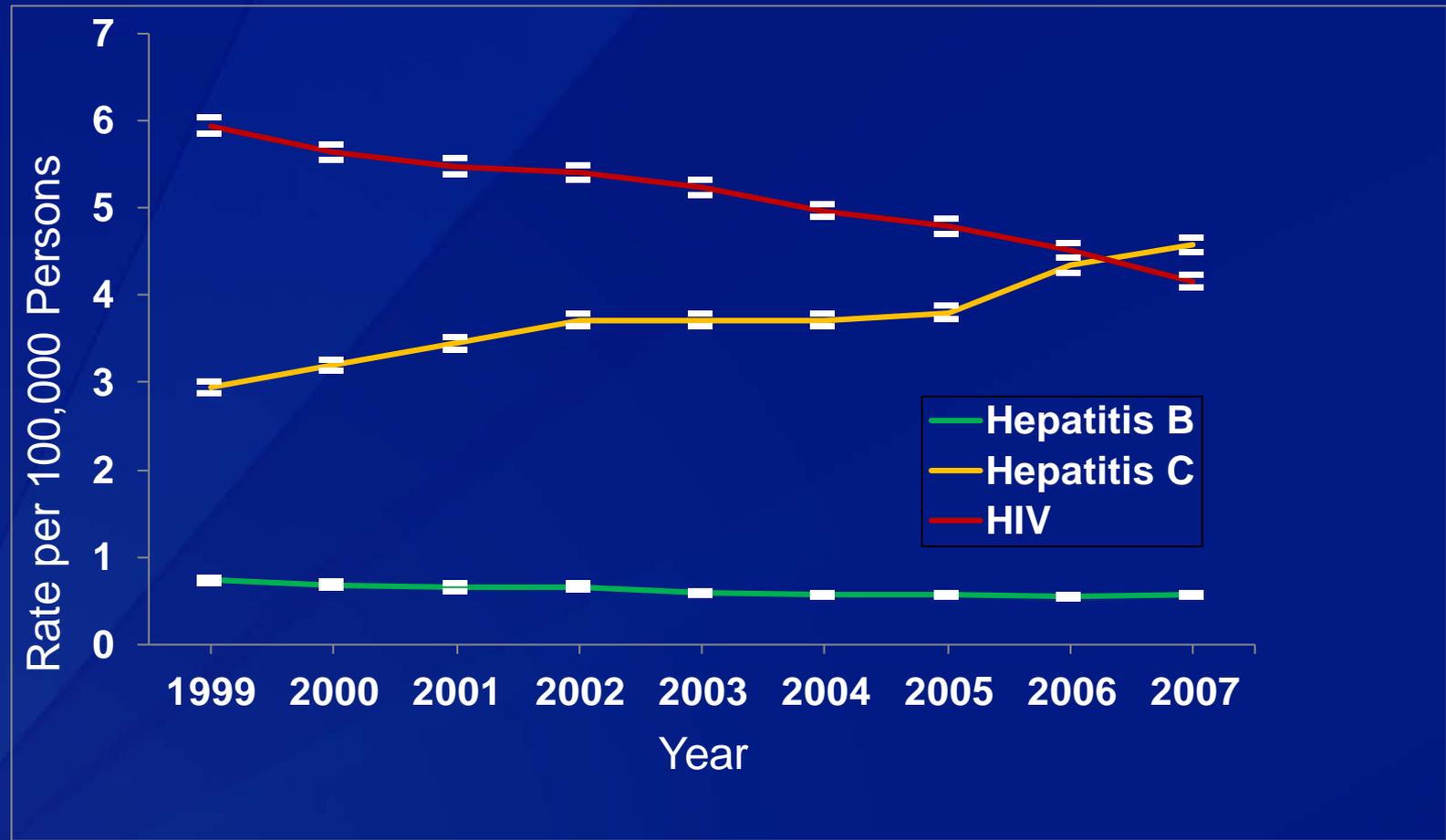
Vital Signs Town Hall Teleconference  
May 14, 2013

# Burden of Hepatitis C Virus Morbidity and Mortality Among Persons Born 1945–1965

- ❑ Prevalence of hepatitis C virus (HCV) is 5.3 times higher than other ages (3.29% vs. 0.55%)<sup>1,2</sup>
- ❑ Represents 81% of all US adult chronic HCV infections
- ❑ Represents 73% of all HCV-associated mortality<sup>4</sup>
- ❑ 45% do not report a risk for infection on national surveys
- ❑ Up to 75% do not know they are infected



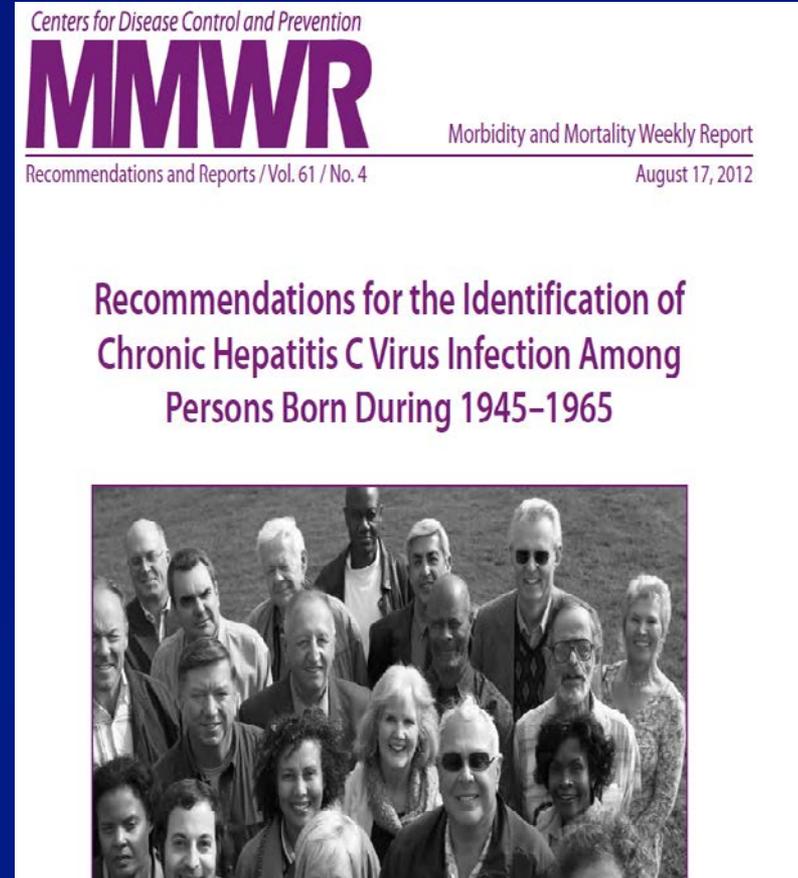
# Mortality Associated with Hepatitis B, Hepatitis C, and HIV, United States, 1999–2008



Ly K, et al. Ann Int Med 2012.

# New CDC Recommendation

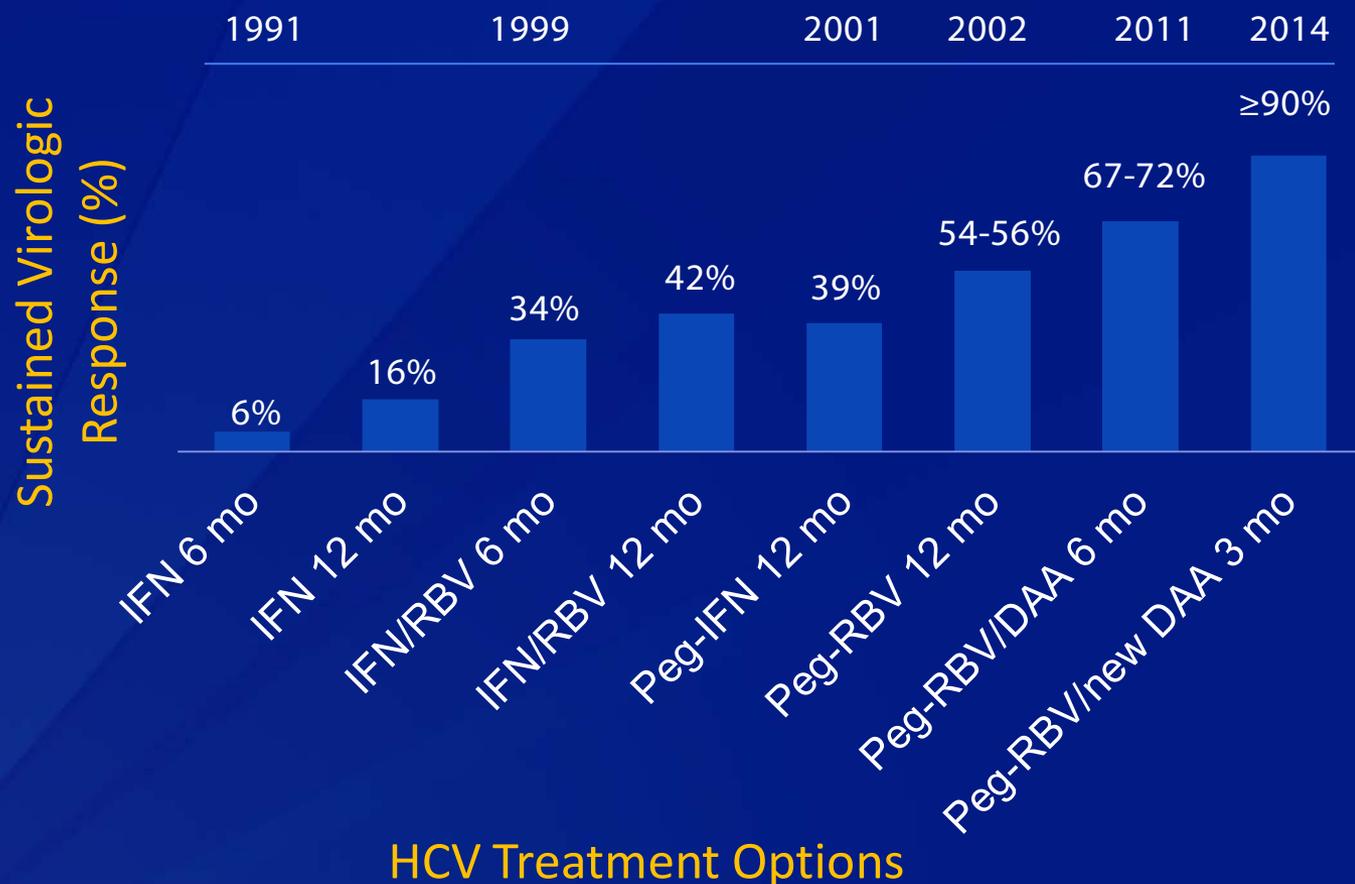
- ❑ Adults born during 1945 through 1965 should receive one-time testing for HCV without prior ascertainment of HCV risk factor
- ❑ Benefits of therapy
  - Reduces risk of liver cancer by 70%
  - Reduces risk of all-cause mortality by 50%



# Health Impact of Birth Cohort Recommendations

Outcome	Birth Cohort Testing with Therapy
	PegIFN-Riba + Telapravir
Additional identified cases	809,000
Cirrhosis cases averted	203,000
Decompensated cirrhosis cases averted	74,000
Hepatocellular carcinoma cases averted	47,000
Transplants averted	15,000
Deaths from hepatitis C virus averted	121,000
Medical costs averted	\$2.5B
Cost/QALY gained	\$35,700

# Advances in HCV Therapy



IFN=interferon; RBV=ribavirin; Peg=pegylated; DAA=direct acting agent

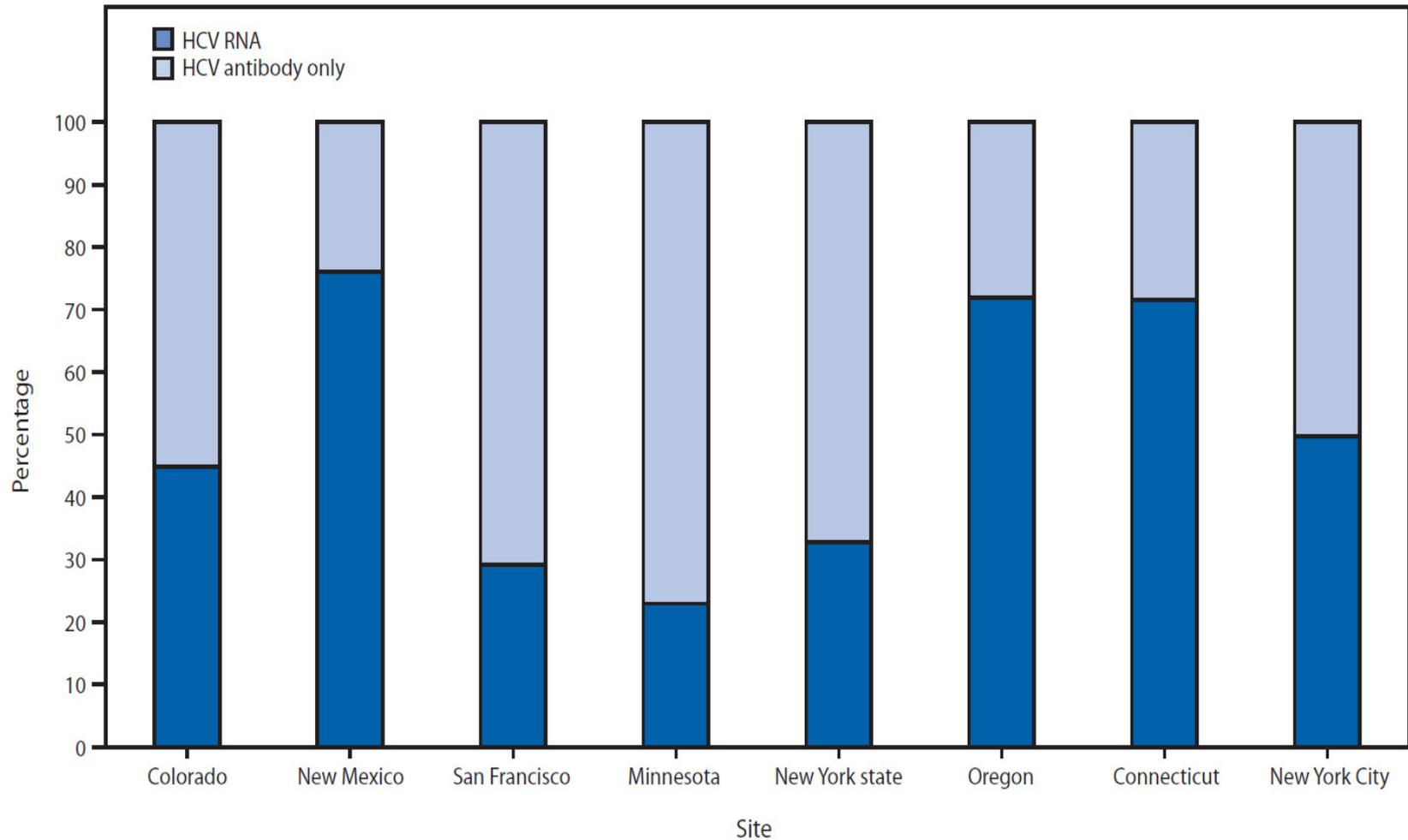
Adapted from Strader DB, et al. *Hepatology*. 2004;37:1147-1171.

## May 7, 2012 Vital Signs Report: Only Half of Persons with HCV Know Whether They Have Active Infection

- ❑ Determining active HCV infection requires an initial antibody test followed by an RNA test
- ❑ Of persons who receive HCV antibody testing, half do not receive a follow-up RNA test, remaining unaware of their risk for HCV-associated liver disease
- ❑ The majority of these persons were born during 1945–1965 and have been living with HCV for decades, placing them at risk for HCV-related illness and death
- ❑ To increase the number of persons who receive potentially curative treatment and needed care, CDC has revised its testing algorithm to include a test for HCV viremia for all persons with a positive HCV antibody test

# Vital Signs Report Highlights HCV Testing at Eight US Sites

FIGURE. Percentage of persons reported with hepatitis C virus (HCV) infection, by type of positive test result and site — eight U.S. sites, 2005–2011



# Additional Data Sources Find Failure to Complete Testing to Confirm HCV Viremia

## ☐ Surveillance

- 50% of HCV surveillance case reports from six US sites during 2006–2007 had no positive results for HCV RNA<sup>1</sup>

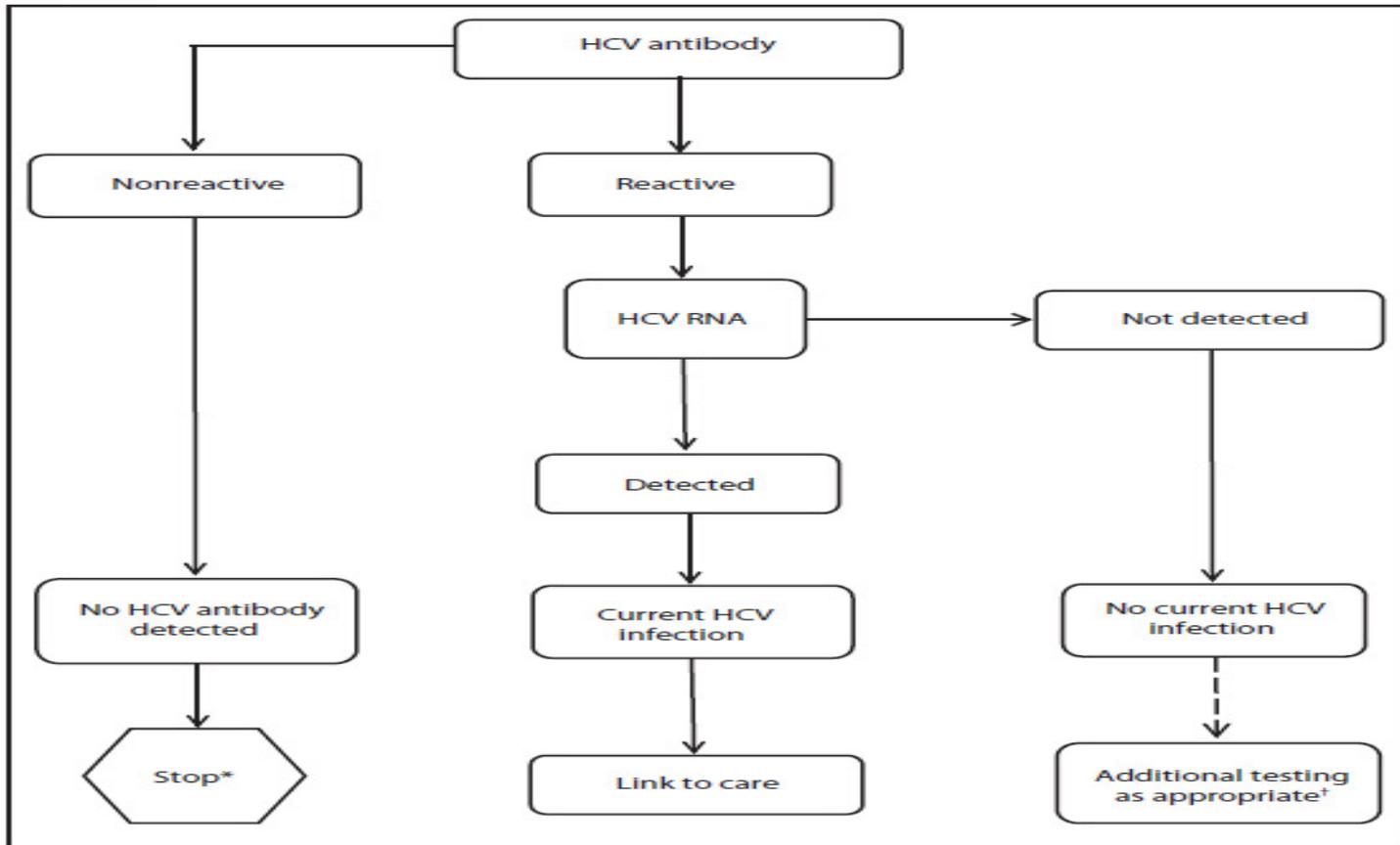
## ☐ Medical record reviews

- 37–38% of patients with positive HCV antibody tests have no record of HCV RNA testing<sup>2,3</sup>

1. MMWR. 2013. 2. Moorman AC, et al. Clin Infect Dis. 2012. 3. Assoumou SA, et al. IDSA. 2012.

# CDC's Recommended HCV Testing Algorithm

FIGURE. Recommended testing sequence for Identifying current hepatitis C virus (HCV) Infection



\* For persons who might have been exposed to HCV within the past 6 months, testing for HCV RNA or follow-up testing for HCV antibody is recommended. For persons who are immunocompromised, testing for HCV RNA can be considered.

† To differentiate past, resolved HCV infection from biologic false positivity for HCV antibody, testing with another HCV antibody assay can be considered. Repeat HCV RNA testing if the person tested is suspected to have had HCV exposure within the past 6 months or has clinical evidence of HCV disease, or if there is concern regarding the handling or storage of the test specimen.

# Thank You

**For more information, please contact the Centers for Disease Control and Prevention**

1600 Clifton Road NE, Atlanta, GA 30333

Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348

E-mail: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

Web: <http://www.cdc.gov>

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

# IMPROVING HEPATITIS C TESTING PRACTICES IN NEW YORK CITY

KATHERINE BORNSCHLEGEL  
KBORNSCH@HEALTH.NYC.GOV

KELLY JAMISON, EMILY MCGIBBON, SHARON BALTER,  
JENNIFER BAUMGARTNER, JENNIFER BRITE

# HEPATITIS C SURVEILLANCE – NEW YORK CITY

- 90,000 hepatitis C virus (HCV) reports per year (>90% from electronic lab reporting system)
  - Positive HCV lab tests (antibody, RNA, genotype)
  - Represents 10,000 persons newly reported each year
  - Automation is key
- Goals:
  - Describe the epidemiology of HCV in NYC
  - Mail educational booklets to people newly reported with HCV
  - Monitor proportion of antibody-positive persons who get HCV RNA testing
    - Develop strategies to increase RNA testing

# ENHANCED HCV SURVEILLANCE

- Started July 2009, discontinued October 2012
  - (Drezner, et al. PH Reports, in press.)
- Investigate a random sample of 20 newly reported patients, every 2 months
- Demographics, health status, labs, barriers to care

## Key finding

- 33% of HCV antibody-positive patients did not have RNA test (even after our investigator requested it)
  - (McGibbon, et al. Am J Med, in press.)



# “IT TAKES TWO” CLINICIAN OUTREACH

## OBJECTIVES

- Increase HCV RNA testing for HCV antibody-positive patients
- Identify clinicians and healthcare facilities who are not ordering HCV RNA tests
  - Provide best-practice guidelines for HCV diagnosis methods
  - Identify and assess barriers to ordering HCV RNA tests
    - Clinician level
    - Healthcare facility level



# “IT TAKES TWO” PILOT

- Identified HCV antibody-positive patients in our surveillance database with no HCV RNA report
- Mass mailing to the clinician who ordered the HCV antibody test
- Recommended they order HCV RNA test:
  - For named patients
  - If they had not already done so
  - If clinically indicated and feasible
- No follow up to encourage response

# "IT TAKES TWO" MAILING

- Cover letter, recommending HCV RNA testing
- Patient Name, date of birth, address, phone #
- Questionnaire (1 page)
- Guidelines explaining why HCV RNA is needed
- Return envelope

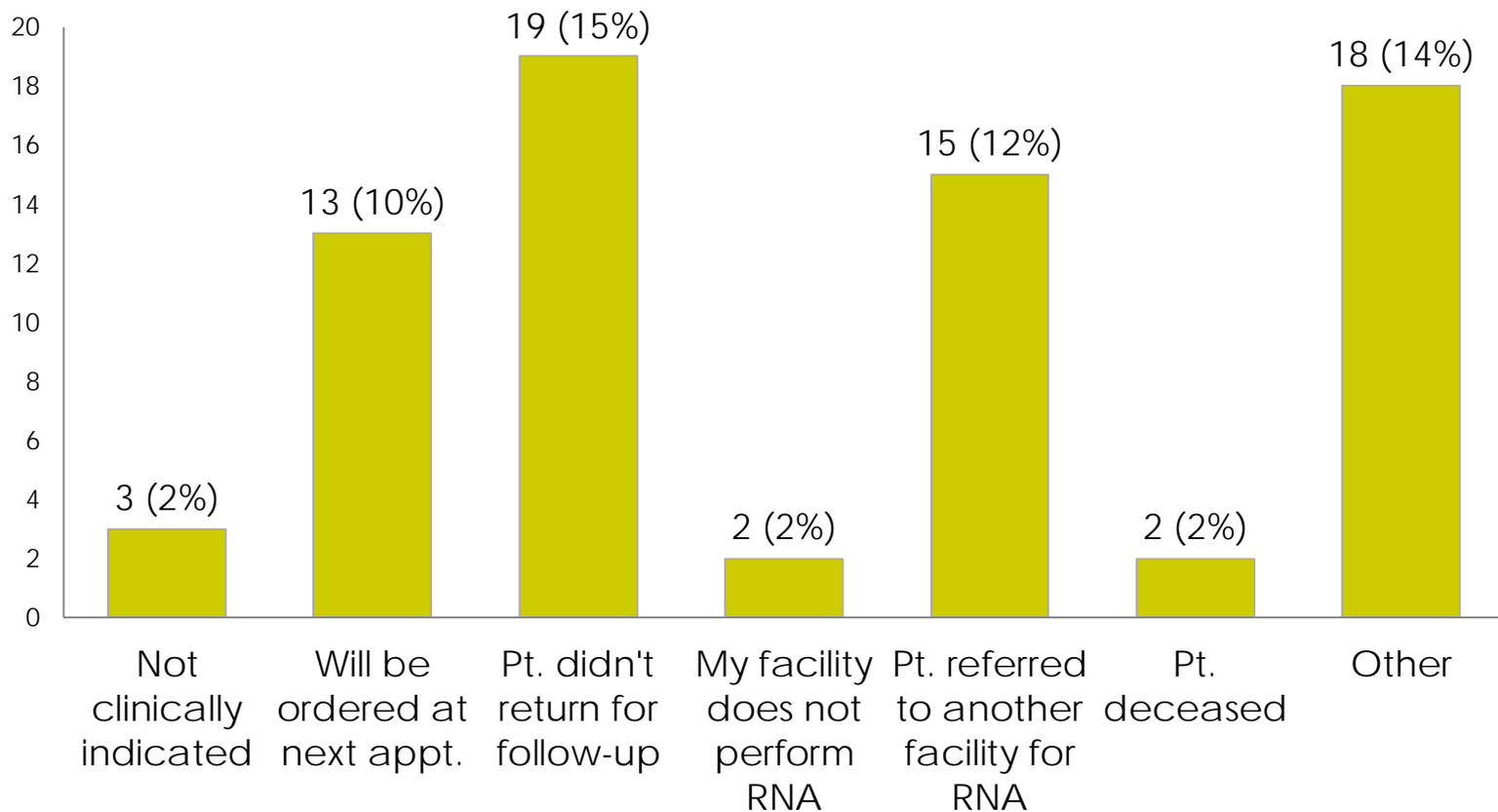
325 patients with positive HCV antibody test in April 2012

Mailed in July 2012: 325 Questionnaires, 285 providers

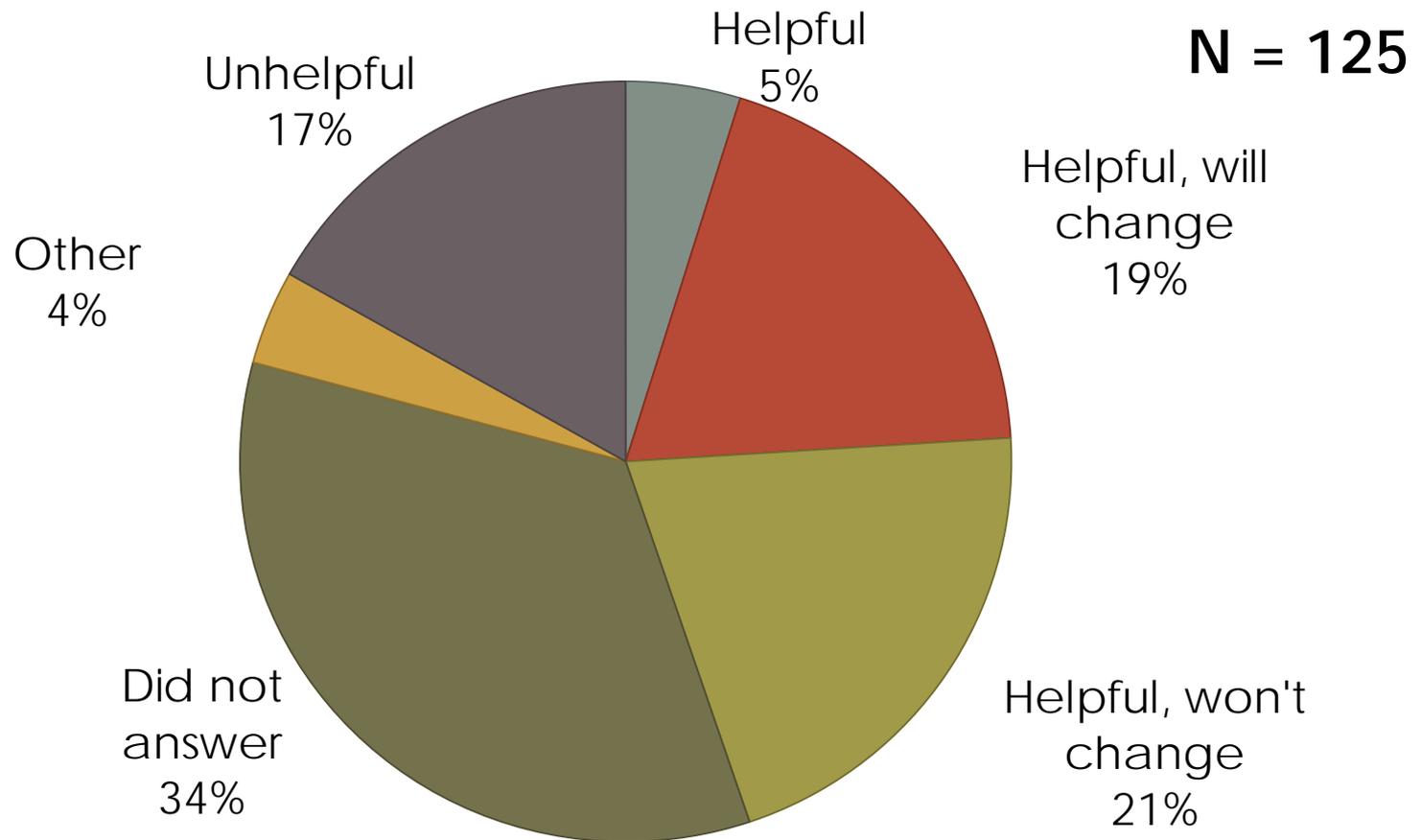
Response rate 39% (questionnaires), 37% (providers)

# IF HCV RNA TEST NOT ORDERED, WHY NOT?

(CATEGORIES NOT MUTUALLY EXCLUSIVE )

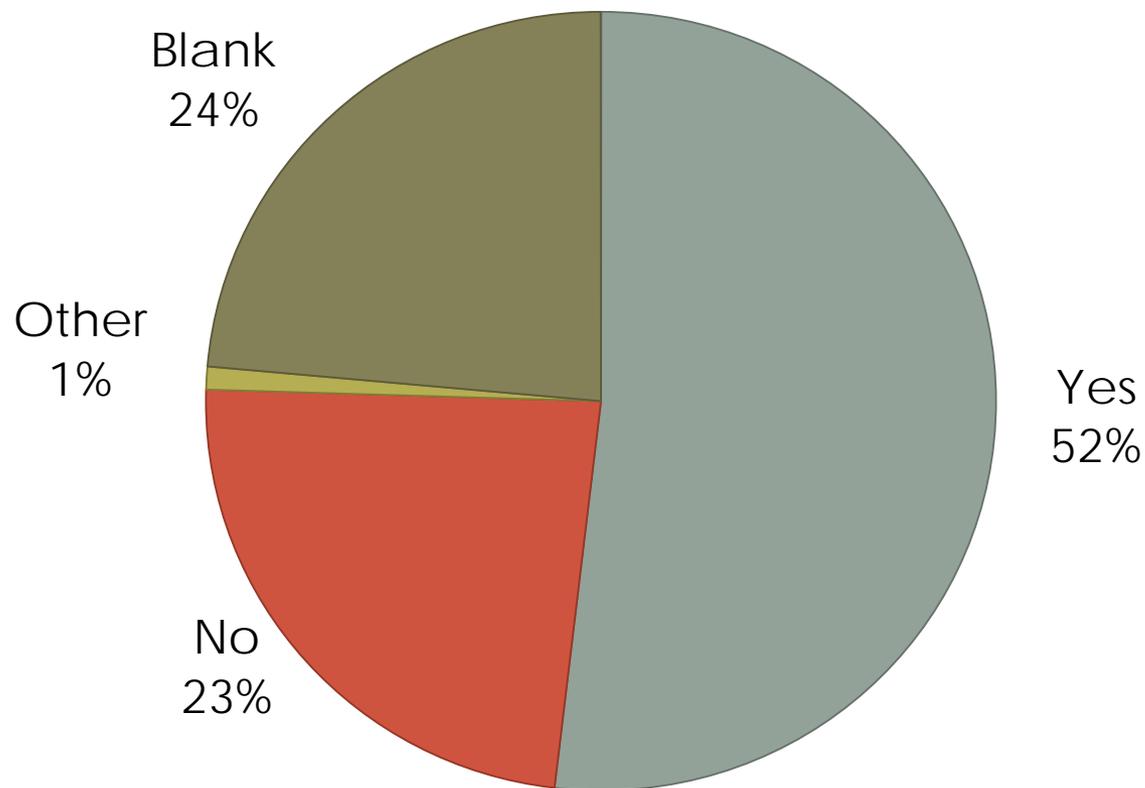


# WAS THE REMINDER HELPFUL?



# WOULD YOU LIKE MORE REMINDERS FROM THE HEALTH DEPARTMENT IN THE FUTURE?

N = 106



# POSITIVE RNA REPORTED WITHIN 6 MONTHS OF 1<sup>ST</sup> POSITIVE HCV TEST

Month of 1 <sup>st</sup> Pos. hep C Test	N	Positive Hep C RNA Within 6 Months	
		Yes (%)	No (%)
February 2012	787	49	51
March 2012	789	53	47
<b>April 2012</b>	<b>690</b>	<b>56</b>	<b>44</b>
May 2012	723	47	53
June 2012	678	46	54

Compared pilot month (56%) to the 4 flanking months combined (49%):  $p < 0.0001$

# POSSIBLE STRATEGIES TO INCREASE HCV RNA TESTING

- Educate clinicians
  - “It Takes Two” mailing project
  - Concise HCV guidelines, testing algorithm
- On lab report for positive antibody test, add clear statement recommending RNA test to determine infection status
- Ensure sites doing antibody tests can order RNA tests
  - A challenge at sites that do rapid antibody tests
  - Need adequate funding and a phlebotomist on site
  - Avoid referring patients to another site for blood draw
- Educate antibody-positive patients about RNA test
  - In NYC, new cover letter with routine education booklet
  - Tailor post-test counseling messages

# POSSIBLE STRATEGIES TO INCREASE HCV RNA TESTING (CONTINUED)

- Understand and address barriers to RNA testing (e.g., at the level of a healthcare facility, lab, funding mechanism)
- Reflex RNA testing
  - Some of the big commercial labs very recently started offering HCV ab with reflex to RNA
- Transition to reflex RNA testing as the standard of care (as with HIV)

## Next steps:

- Explore how to ensure people with a positive HCV RNA test get best medical mgmt and evaluation for antiviral tx



# Hepatitis C Virus Infection Among Young People in Massachusetts

Shauna Onofrey, MPH  
Massachusetts Department of Public Health  
[shauna.onofrey@state.ma.us](mailto:shauna.onofrey@state.ma.us)

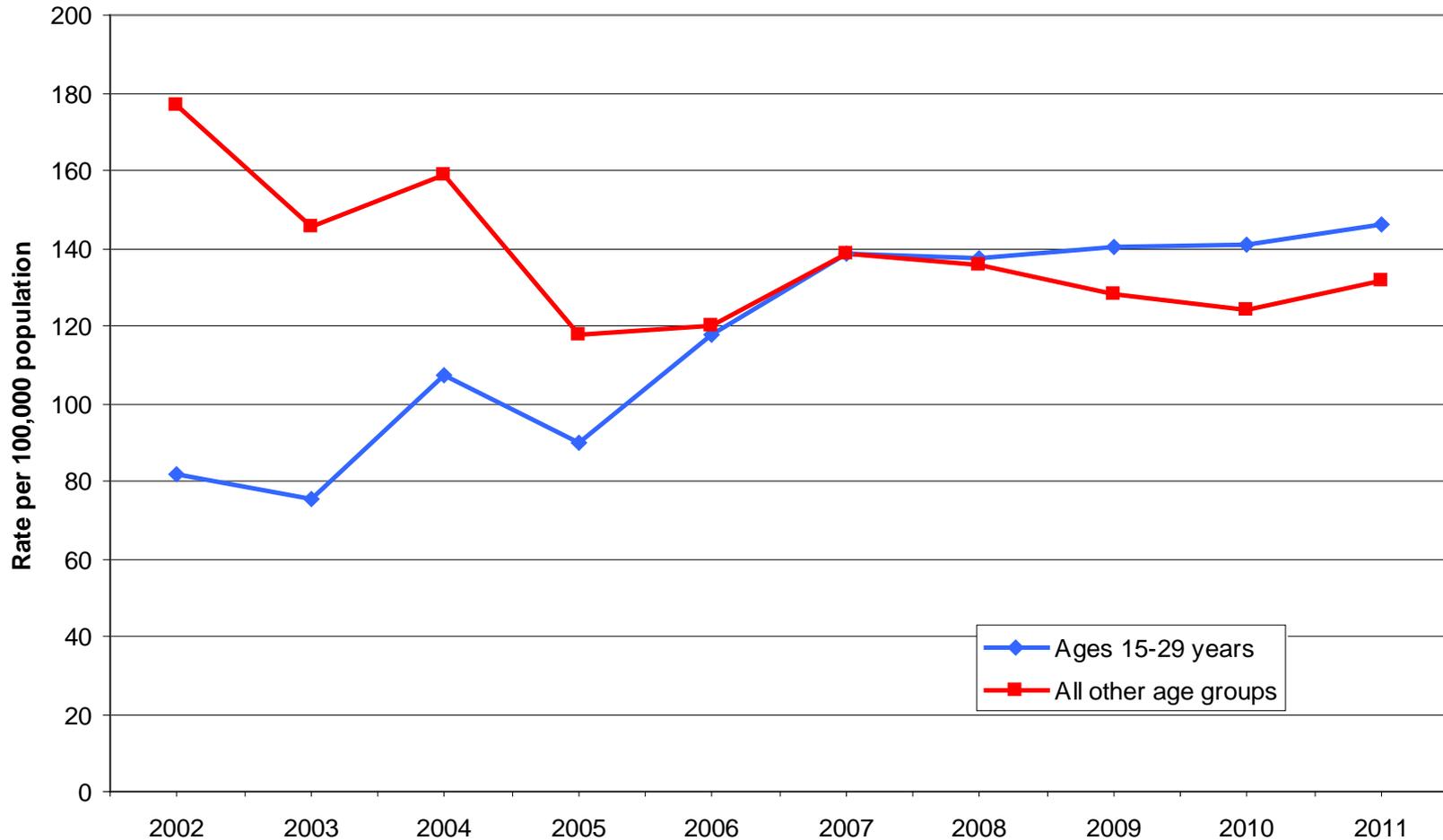
# Hepatitis C Virus Surveillance in Massachusetts

- Any evidence of hepatitis C virus (HCV) infection reportable in Massachusetts since 1992
  - Most laboratory evidence reported automatically through electronic laboratory reporting (ELR)
- Use the Massachusetts Virtual Epidemiology Network (MAVEN), an integrated web-based, person-based, disease surveillance system
- 7,000 to 10,000 cases newly reported annually since 2002
  - 65% confirmed—have RNA+, RIBA+, or high signal to cutoff ratio

# Increases of HCV Infection Among Adolescents and Young Adults

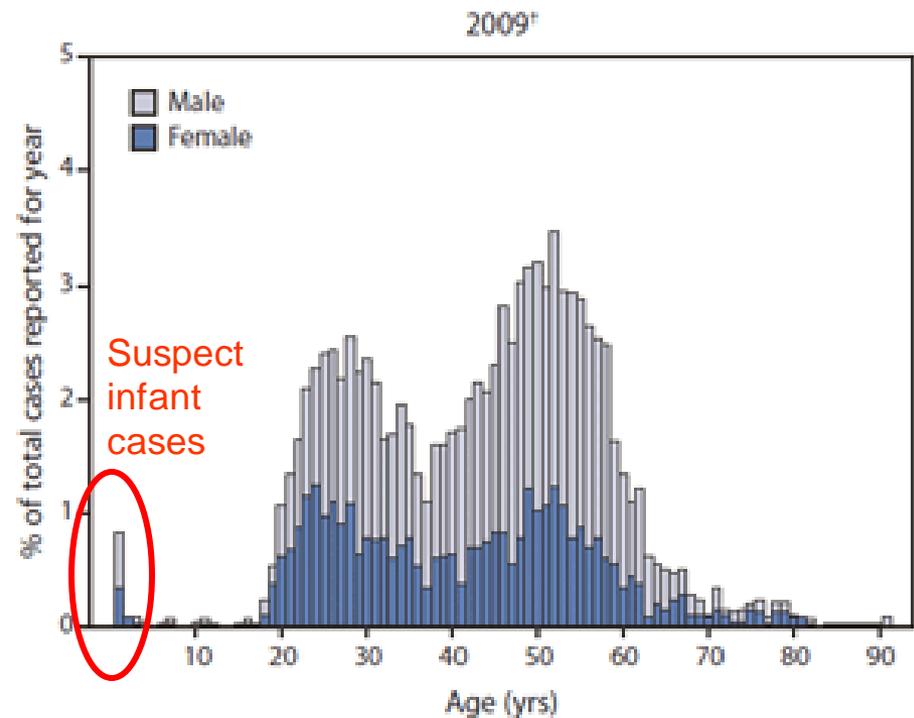
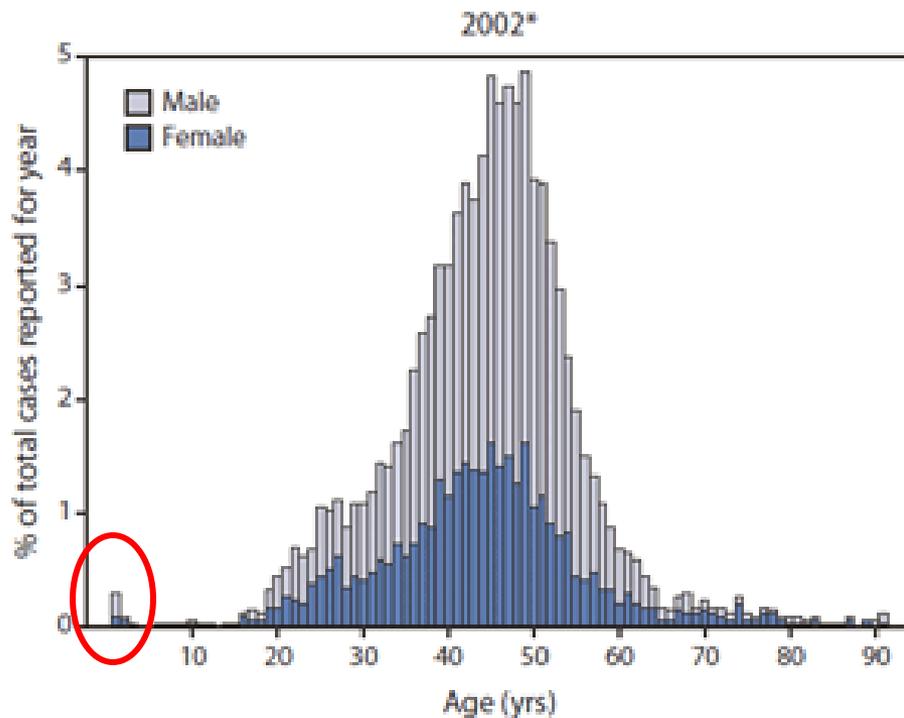
- Enhanced surveillance for reported HCV infection in adolescents and young adults initiated in 2007, and clinical advisory posted in response to community input and initial data analysis
- Over 1,000 cases of HCV infection reported annually among those ages 15 to 25 years since 2007
- More than 50% of cases in this age group are female, vs. 30% female for all other ages
- Available race/ethnicity data for cases with a completed reporting form indicate approximately 80% percent of cases are white and 90% are not Hispanic
- Risk data consistently link increase to injection of heroin

# Rates of HCV Infection (confirmed and probable) Reported Among Cases Aged 15–29 Years and All Other Age Groups, Massachusetts, 2002–2011



Massachusetts Dept. of Public Health, Bureau of Infectious Disease, Epidemiology Program. Data as of February 2013 and subject to change. Denominator from US Census 2010.

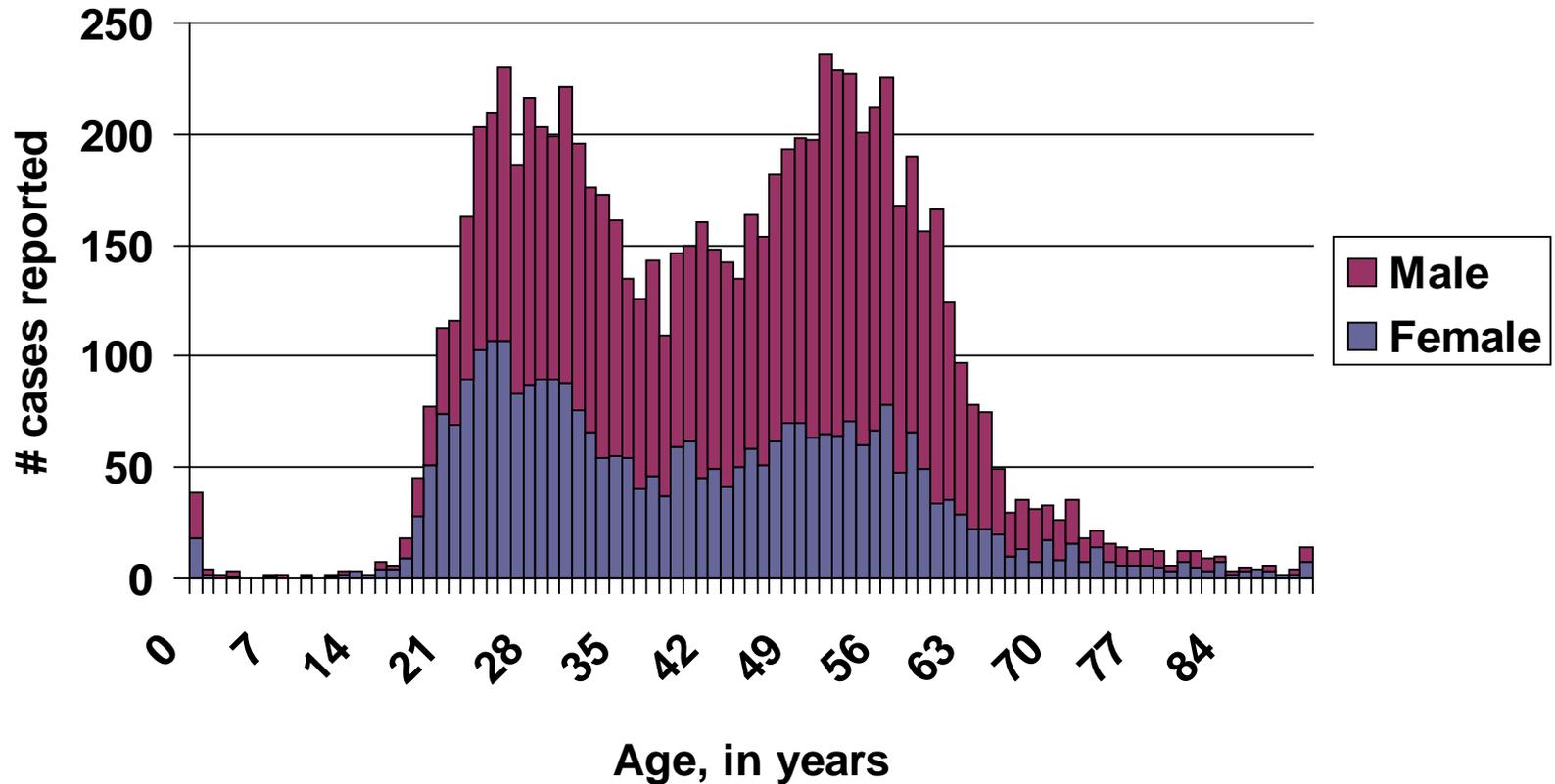
# MMWR: Age Distribution of Newly Reported, Confirmed Cases of HCV Infection Massachusetts, 2002 and 2009



\* N = 6,281; excludes 35 cases with missing age or sex information.

† N = 3,904; excludes 346 cases with missing age or sex information.

# Confirmed and Probable Cases of HCV Infection by Age and Gender in Massachusetts, 2011



# CDC Funded Enhanced Follow-Up of Young HCV Cases

- Conducted 63 interviews with cases 18–24 years of age (15% of cases reported between Aug 2011 and Feb 2012)
- Results of phone interviews:
  - 87% reported any drug use
  - 65% reported injecting drugs, most frequently injecting heroin only
  - Females more likely to be introduced to injecting by, and continue to inject with, a sex partner
  - All injecting equipment, including syringes, were reported to be shared

# Limitations of Surveillance Data

- Data only represent those seen by a medical provider, tested and reported to MDPH
- Negative tests not reportable
- Limited data on race/ethnicity, risk history
- Despite strong evidence for high rates of transmission, very few confirmed acute cases reported to MDPH (~25 cases annually)

# Impact of Data

- Fully integrated HCV into all HIV prevention and screening programs (34 statewide)
- Worked with community partners to increase education about, and awareness of, situation
- Published “Shifting Epidemics”—an overview of injection drug user health, and HIV and HCV infection in Massachusetts
- Continue to enhance surveillance efforts and analytics to better characterize this population
- Recognized need for enhanced and expanded prevention efforts in light of continued large number of reported cases

# **CDC *Vital Signs* Electronic Media Resources**

**Become a fan on Facebook**

**[www.facebook.com/cdc](http://www.facebook.com/cdc)**

**Follow us on Twitter**

**[twitter.com/CDCgov/](http://twitter.com/CDCgov/)**

**Syndicate *Vital Signs* on your website**

**<http://tools.cdc.gov/syndication/search.aspx?searchURL=www.cdc.gov%2fvitalsigns>**

***Vital Signs* interactive buttons and banners**

**[www.cdc.gov/vitalsigns/SocialMedia.html](http://www.cdc.gov/vitalsigns/SocialMedia.html)**

# Public Health Practice Stories from the Field

- Stories about the implementation of Public Health Practice Stories from the Field



[www.cdc.gov/stltpublichealth/phpracticestories](http://www.cdc.gov/stltpublichealth/phpracticestories)

Provide feedback on this teleconference:

[OSTLTSFeedback@cdc.gov](mailto:OSTLTSFeedback@cdc.gov)



Please mark your calendars for the next  
**OSTLTS Town Hall Teleconference**

**June 11, 2013**

**2:00–3:00 pm (EDT)**

**For more information, please contact Centers for Disease Control and Prevention.**

1600 Clifton Road NE, Atlanta, GA 30333  
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348  
Email: [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov) Web: [www.cdc.gov](http://www.cdc.gov)

The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



Centers for Disease Control and Prevention  
Office for State, Tribal, Local and Territorial Support